WHAT IS CLAIMED IS

1. A semiconductor device for fingerprint recognition, comprising:

a semiconductor chip having a fingerprint recognition area for performing fingerprint recognition,

a substrate having an opening that corresponds to said fingerprint recognition area, said semiconductor chip being flip chip bonded to said substrate such that said fingerprint recognition area corresponds to said opening, and

an under-fill material provided between said semiconductor chip and said substrate except for a position where said opening is formed.

2. The semiconductor device for fingerprint recognition as claimed in claim 1, wherein said substrate comprises a glass epoxy base material.

3. The semiconductor device for fingerprint recognition as claimed in claim 1, wherein said substrate comprises a polyimide resin base material.

4. The semiconductor device for fingerprint recognition as claimed in claim 1, wherein said substrate is a flexible substrate.

5. The semiconductor device for fingerprint recognition as claimed in claim 1, wherein said substrate is a TAB substrate.

6. The semiconductor device for fingerprint recognition as claimed in claim 1, wherein said substrate comprises an external connection terminal constituted by a solder ball.

7. The semiconductor device for fingerprint recognition as claimed in claim 1, wherein said substrate comprises an external connection terminal constituted by a connector.

8. The semiconductor device for fingerprint recognition as claimed in claim 1, wherein said semiconductor chip performs fingerprint recognition using the electrostatic-capacity principle, and by a finger sweeping across said fingerprint recognition area.

9. A semiconductor device for fingerprint recognition, comprising:

a semiconductor chip having a fingerprint recognition area for performing fingerprint recognition,

a substrate having a first opening that corresponds to said fingerprint recognition area, and a second opening, said semiconductor chip being installed on said substrate such that said fingerprint recognition area corresponds to said first opening, and said semiconductor chip and said substrate being electrically connected by a wire that is put through said second opening, and

a sealing resin for protecting said semiconductor chip and said substrate, said sealing resin being provided on a first surface that is opposite to a second surface on which second surface said semiconductor chip is installed, said first surface and said second surface being of said substrate.

10. A semiconductor device for fingerprint recognition, comprising:

a semiconductor chip having a fingerprint recognition area for performing fingerprint recognition, and having a penetration via, said fingerprint recognition area being prepared on a first surface of said semiconductor chip,

a substrate for mounting said semiconductor chip, wherein said semiconductor chip

is flip chip bonded to said substrate with a second surface facing said substrate, said second surface being opposite to said first surface, and

an under-fill material provided between said semiconductor chip and said substrate.

11. A semiconductor device for fingerprint recognition, comprising:

a semiconductor chip having a fingerprint recognition area for performing fingerprint recognition, and a penetration via, said fingerprint recognition area being prepared on a first surface of said semiconductor chip,

a re-wiring that is formed on a second surface of said semiconductor chip, said second surface being opposite to said first surface, wherein said re-wiring is electrically connected to said fingerprint recognition area by said penetration via, and

an insulation layer for covering said second surface except for a position where an external connection terminal of said re-wiring is present.